



### AMENDMENTS TO THE CLAIMS

Following is a listing of all claims in the present application, which listing supersedes all previously presented claims:

#### Listing of Claims:

1. (Original) A method for recognizing a pattern of an alignment mark on a wafer,  
the method comprising:  
  
positioning the wafer on an adjustable wafer stage in ~~an alignment~~ a measurement  
apparatus;  
  
capturing images of a key alignment mark by magnifying an alignment mark region of  
the wafer;  
  
deleting image data from a region where the alignment pattern does not exist between the  
captured images; and  
  
extracting an alignment mark pattern by a pattern recognition of the remaining image  
data after the deletion of the image data.
2. (Original) The method for recognizing a pattern of an alignment mark on a wafer  
as claimed in claim 1, wherein the key alignment mark is magnified by at least about four  
magnifications.
3. (Original) The method for recognizing a pattern of an alignment mark on a wafer  
as claimed in claim 1, wherein a related pattern is recognized during a set-up of the measurement  
apparatus for measuring parameters relative to a particle on the wafer, a thickness of the pattern,  
a critical dimension of the pattern or a depth of the pattern.

4. (Currently Amended) A method for recognizing a pattern of an alignment mark on a wafer, the method comprising:

providing the wafer into ~~an alignment~~ a measurement apparatus;  
identifying a key alignment mark in an alignment mark region of the wafer;  
capturing an image by magnifying only the identified key alignment mark;  
extracting an alignment mark pattern by a pattern recognition of the captured image; and  
establishing the extracted alignment mark pattern as a reference mark.

5. (New) The method for recognizing a pattern of an alignment mark on a wafer as claimed in claim 1, wherein the images are captured by the measurement apparatus that includes a controlling member.

6. (New) The method for recognizing a pattern of an alignment mark on a wafer as claimed in claim 5, wherein the controlling member recognizes converted image data via a pattern recognition algorithm.

7. (New) The method for recognizing a pattern of an alignment mark on a wafer as claimed in claim 5, wherein the controlling member controls a driving member to adjust alignment of the wafer in accordance with the pattern recognition.

8. (New) The method for recognizing a pattern of an alignment mark on a wafer as claimed in claim 1, wherein the images are captured with a CCD sensor.

9. (New) The method for recognizing a pattern of an alignment mark on a wafer as claimed in claim 8, wherein the CCD sensor transforms incident light with a photoelectric conversion method into two-dimensional gray level image data.

10. (New) The method for recognizing a pattern of an alignment mark on a wafer as claimed in claim 1, wherein a box region includes the key alignment mark.

11. (New) The method for recognizing a pattern of an alignment mark on a wafer as claimed in claim 1, wherein the key alignment mark has a window frame shape.

12. (New) The method for recognizing a pattern of an alignment mark on a wafer as claimed in claim 1, wherein the key alignment mark has a square shape with a cross inside.

13. (New) The method for recognizing a pattern of an alignment mark on a wafer as claimed in claim 4, wherein the image is captured by the measurement apparatus that includes a controlling member.

14. (New) The method for recognizing a pattern of an alignment mark on a wafer as claimed in claim 13, wherein the controlling member recognizes converted image data via a pattern recognition algorithm.

15. (New) The method for recognizing a pattern of an alignment mark on a wafer as claimed in claim 13, wherein the controlling member controls a driving member to adjust alignment of the wafer in accordance with the pattern recognition.

16. (New) The method for recognizing a pattern of an alignment mark on a wafer as claimed in claim 4, wherein the image is captured with a CCD sensor.

17. (New) The method for recognizing a pattern of an alignment mark on a wafer as claimed in claim 16, wherein the CCD sensor transforms incident light with a photoelectric conversion method into two-dimensional gray level image data.

18. (New) The method for recognizing a pattern of an alignment mark on a wafer as claimed in claim 4, wherein a box region includes the key alignment mark.

19. (New) The method for recognizing a pattern of an alignment mark on a wafer as claimed in claim 4, wherein the key alignment mark has a window frame shape.

20. (New) The method for recognizing a pattern of an alignment mark on a wafer as claimed in claim 4, wherein the key alignment mark has a square shape with a cross inside.